

Serial No. 10/549,299
Customer No. 24498

PU030087

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Inventor: Guillaume Bichot

Application No.: 10/549,299

Confirmation No.: 3592

Filed: 15 September 2005

Title: TIGHT COUPLING SIGNALING CONNECTION
MANAGEMENT FOR COUPLING A WIRELESS
NETWORK WITH A CELLULAR NETWORK

Examiner: Steven C. Nguyen

Art Unit: 2443

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APPEAL BRIEF

Sir:

The Appellant hereby submits this Notice of Appeal and Brief to the Board of Patent Appeals and Interferences, on appeal from the decision of the Examiner dated 13 April 2010, finally rejecting Claims 1-9 and 18-27.

The Appellant hereby petitions for a two-month extension of the period for response to the final rejection. Please charge the fee for this extension to Deposit Account No. 07-0832.

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Real Party in Interest

The real party in interest is:

THOMSON LICENSING S.A.,
46 Quai A. LeGallo
F-92100 Boulogne Billancourt
France,

the assignee of the entire right, title and interest in and to the subject application, by virtue of an assignment recorded with the US Patent and Trademark Office on 15 September 2005, at Reel/Frame 017755/0009.

Related Appeals and Interferences

The Appellants assert that no other appeals or interferences are known to the Appellants, the Appellants' legal representatives or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-27 are pending. Claims 10-17 have been withdrawn from consideration. Claims 1-9 and 18-27, all of the remaining Claims in the application, have been rejected. The rejection of Claims 1-9 and 18-27 is appealed.

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Status of Amendments

All submitted amendments have been entered.

Summary of Claimed Subject Matter

The following sets forth independent Claims 1, 18, 21 and 27, with parenthesized references to the instant specification:

1. A method for establishing a signaling connection between a client terminal and a communications network, the method comprising the steps of:

establishing an authentication connection between the client terminal and the communications network (page 18, lines 25-26);

transmitting an authentication message from the communications network to the client terminal (page 18, lines 26-27);

transmitting set-up parameters from the communications network to the client terminal, the set-up parameters including information for establishing a signaling connection tunnel between the client terminal and the communications network for transferring control data (page 18, lines 23-29);

establishing the control data signaling connection tunnel using the set-up parameters (page 18, lines 29-30);

transmitting signaling information between the client terminal and the communications network via the control data signal connection tunnel (page 18, line 30 to page 19, line 1); and

closing the authentication connection (page 19, lines 1-3).

18. A method for operating a client terminal to establish a control connection to a communications network, said method comprising the steps of:

from said client terminal, establishing an authentication connection between said client terminal and said communications network, and requesting authentication (page 18, lines 25-27);

at said client terminal, receiving an authentication message from said communication network, said authentication message including set-up parameters defining a control data signaling connection tunnel between said client terminal and said communications network (page 18, lines 27-29);

from said client terminal, setting up said control data signaling connection tunnel by use of said set-up parameters (page 18, line 30 to page 19, line 1);

transmitting control information between said client terminal and said communications network via said control data signaling connection tunnel (page 18, line 30 to page 19, line 1); and

closing said authentication connection (page 19, lines 1-3).

21. A method for communicating signaling and control information between a mobile device and a communications network, said method comprising:

establishing a radio connection between said mobile device and said communications network (page 18, lines 25-26);

receiving by said mobile device authentication from said communications network (page 18, lines 25-27);

receiving by said mobile device a signaling request including parameters from said communications network (page 18, lines 27-28);

establishing by said mobile device a tunnel with said communications network (page 18, lines 26-29);

forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established (page 19, lines 23-26);

receiving by said mobile device an indication from said communications network of completion of authorization to communicate

with said communications network through an access point (page 19, lines 30-32);

terminating receipt of said authentication by said mobile device (page 20, lines 1-5); and

opening a connection through said established tunnel (page 20, lines 5-6).

27. A mobile device for exchanging information with a communications network, comprising:

means for establishing a radio connection between said mobile device and said communications network (page 18, lines 25-26);

means for receiving by said mobile device authentication from said communications network (page 18, lines 26-27);

means for receiving by said mobile device a signaling request including parameters from said communications network for establishing a signaling connection tunnel (page 18, lines 26-29);

means for forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established (page 18, line 30 to page 19, line 1);

means for receiving by said mobile device an indication from said communications network of completion of authorization to communicate with said communications network through an access point (page 19, lines 30-32);

means for closing said radio connection by said mobile device (page 20, lines 1-5); and

means for opening a connection through said established tunnel (page 20, lines 5-6).

Grounds of Rejection to be Reviewed on Appeal

1. Whether cited US 2004/0098588 to Ohba et al is available to be cited against the instant application.
2. Whether Claims 1, 2, 5-7, 18-21 and 23 to 27, are patentable under 35 USC 103(a) over US 2004/0066769 to Ahmavaara et al in view of Ohba et al, assuming that Ohba et al is available to be cited against the instant application.
3. Whether Claims 3 and 9 are patentable under 35 USC 103(a) over Ahmaavara et al in view of Ohba et al and US 7,260,061 to Pellert, assuming that Ohba et al is available to be cited against the instant application.
4. Whether Claims 4 and 22 are patentable under 35 USC 103(a) over Ahmaavara et al in view of Ohba et al and US 2005/0210251 to Nyberg et al, assuming that Ohba et al is available to be cited against the instant application.
5. Whether Claim 8 is patentable under 35 USC 103(a) over Ahmaavara et al in view of Ohba et al and US 2004/0054794 to Lantto et al, assuming that Ohba et al is available to be cited against the instant application.

Remarks/Arguments

1. Cited US 2004/0098588 to Ohba et al was filed on 1 July 2003. The priority date of the instant application is 18 March 2003. It is therefore clear that Ohba et al is not available to be cited against the instant application. Since the Examiner has applied Ohba et al in all claim rejections, the Applicant submits that the entire final rejection is improper, and should be completely reversed for this reason alone.

2. The Examiner has rejected Claims 1, 2, 5-7, 18-21 and 23-27 as unpatentable over Ahmavaara et al. in view of Ohba et al. The Examiner has asserted that Ahmavaara et al show establishment of a data signalling connection tunnel. However, nowhere does Ahmavaara et al show or suggest:

“transmitting set-up parameters from the communications network to the client terminal, the set-up parameters including information for establishing a signaling connection tunnel between the client terminal and the communications network for transferring control data;

establishing the control data signaling connection tunnel using the set-up parameters;

transmitting signaling information between the client terminal and the communications network via the control data signal connection tunnel; and

closing the authentication connection”,

as specifically recited in independent Claim 1. Ahmavarra et al discloses a tunnel between authentication server 50 and access server 40 (page 4, ¶0052), and between access server 40 and gateway 60 (page 6, ¶0094). However, nowhere does Ahmavarra et al show or suggest any tunnel to client terminal 10. Similarly, nowhere does Ohba et al show or suggest any tunnel to a client terminal. It is therefore clear that neither Ahmavarra et al nor Ohba et al affect the patentability of independent

Claim 1, even if it is assumed that Ohba et al is available to be cited against the instant application.

Similarly, nowhere does either Ahmavarra et al or Ohba et al. show or suggest:

“at said client terminal, receiving an authentication message from said communication network, said authentication message including set-up parameters defining a control data signaling connection tunnel between said client terminal and said communications network;

from said client terminal, setting up said control data signaling connection tunnel by use of said set-up parameters;

transmitting control information between said client terminal and said communications network via said control data signaling connection tunnel; and

closing said authentication connection”,

as specifically recited in independent Claim 18. Rather, as explained above, Ahmavarra et al discloses a tunnel between authentication server 50 and access server 40 (page 4, ¶0052), and between access server 40 and gateway 60 (page 6, ¶0094). However, nowhere does Ahmavarra et al show or suggest any tunnel to client terminal 10. Similarly, nowhere does Ohba et al show or suggest any tunnel to a client terminal. It is therefore clear that neither Ahmavarra et al nor Ohba et al affect the patentability of independent Claim 18, even if it is assumed that Ohba et al is available to be cited against the instant application.

Similarly, nowhere does either Ahmavarra et al or Ohba et al. show or suggest:

“establishing by said mobile device a tunnel with said communications network;

forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established;

receiving by said mobile device an indication from said communications network of completion of authorization to communicate with said communications network through an access point;

terminating receipt of said authentication by said mobile device;
and

opening a connection through said established tunnel”,

as specifically set forth in independent Claim 21. Rather, as explained above, Ahmavarra et al discloses a tunnel between authentication server 50 and access server 40 (page 4, ¶0052), and between access server 40 and gateway 60 (page 6, ¶0094). However, nowhere does Ahmavarra et al show or suggest any tunnel to client terminal 10. Similarly, nowhere does Ohba et al show or suggest any tunnel to a client terminal. It is therefore clear that neither Ahmavarra et al nor Ohba et al affect the patentability of independent Claim 21, even if it is assumed that Ohba et al is available to be cited against the instant application.

Similarly, nowhere does either Ahmavarra et al or Ohba et al. show or suggest:

“means for receiving by said mobile device a signaling request including parameters from said communications network for establishing a signaling connection tunnel;

means for forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established;

means for receiving by said mobile device an indication from said communications network of completion of authorization to communicate with said communications network through an access point;

means for closing said radio connection by said mobile device; and means for opening a connection through said established tunnel",

as specifically recited in independent Claim 27. Rather, as explained above, Ahmavarra et al discloses a tunnel between authentication server 50 and access server 40 (page 4, ¶0052), and between access server 40 and gateway 60 (page 6, ¶0094). However, nowhere does Ahmavarra et al show or suggest any tunnel to client terminal 10. Similarly, nowhere does Ohba et al show or suggest any tunnel to a client terminal. It is therefore clear that neither Ahmavarra et al nor Ohba et al affect the patentability of independent Claim 27, even if it is assumed that Ohba et al is available to be cited against the instant application.

Claims 2 and 5-7 are dependent from Claim 1 and add further advantageous features. The Applicant submits that these subclaims are patentable as their parent Claim 1.

Claims 19 and 20 are dependent from Claim 18 and add further advantageous features. The Applicant submits that these subclaims are patentable as their parent Claim 18.

Claims 23-26 are dependent from Claim 21 and add further advantageous features. The Appellant submits that these subclaims are patentable as their parent Claim 21.

3. Pellert has been cited against subclaims 3 and 9, which depend from Claim 1. Pellert shows a tunnel 124 between interworking units (column 4, lines 44-47). Nowhere does Pellert show or suggest a tunnel to a client terminal. It is therefore clear that Pellert does not affect the patentability of parent Claim 1, much less the patentability of subclaims 3 and 9.

4. The Examiner has cited US 2005/0210251 to Nyberg et al against subclaims 4 and 22. Nyberg et al relates to authentication of a user by a network and a network by a user in which a user is coupled to an

authentication server by a tunnel. Nowhere does Nyberg et al show or suggest:

“transmitting set-up parameters from the communications network to the client terminal, the set-up parameters including information for establishing a signaling connection tunnel between the client terminal and the communications network for transferring control data;

establishing the control data signaling connection tunnel using the set-up parameters;

transmitting signaling information between the client terminal and the communications network via the control data signal connection tunnel; and

closing the authentication connection”,

as set forth in parent Claim 1. Furthermore, nowhere does Nyberg et al show or suggest:

“establishing by said mobile device a tunnel with said communications network;

forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established;

receiving by said mobile device an indication from said communications network of completion of authorization to communicate with said communications network through an access point;

terminating receipt of said authentication by said mobile device; and

opening a connection through said established tunnel”,

as specifically set forth in independent Claim 21. It is therefore clear that Nyberg et al does not affect the patentability of independent Claims 1 and 21, much less, the patentability of dependent Claims 4 and 22.

5. US 2004/0054794 to Lantto et al has been cited against dependent Claim 8. Lantto relates to a method for access by a user to a private network in which a user is coupled to an authentication server by a tunnel. Nowhere does Lantto et al show or suggest:

“transmitting set-up parameters from the communications network to the client terminal, the set-up parameters including information for establishing a signaling connection tunnel between the client terminal and the communications network for transferring control data;

establishing the control data signaling connection tunnel using the set-up parameters;

transmitting signaling information between the client terminal and the communications network via the control data signal connection tunnel; and

closing the authentication connection”,

as set forth in parent Claim 1. It is therefore clear that the patentability of parent Claim 1 is not affected by Lantto et al, much less the patentability of dependent Claim 8.

The Appellant therefore submits that, for the above reasons, the final rejection is improper and should be reversed. A notice to that effect is respectfully solicited.

Respectfully submitted,
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Claims Appendix

1. A method for establishing a signaling connection between a client terminal and a communications network, the method comprising the steps of:

establishing an authentication connection between the client terminal and the communications network;

transmitting an authentication message from the communications network to the client terminal;

transmitting set-up parameters from the communications network to the client terminal, the set-up parameters including information for establishing a signaling connection tunnel between the client terminal and the communications network for transferring control data;

establishing the control data signaling connection tunnel using the set-up parameters;

transmitting signaling information between the client terminal and the communications network via the control data signal connection tunnel; and

closing the authentication connection.

2. The method according to claim 1, further comprising the step of transmitting from the client terminal to the communications network acknowledgement of receipt of the set-up parameters.

3. The method according to claim 1, wherein the control data signal connection tunnel is a dedicated signaling tunnel.

4. The method according to claim 1, wherein the client terminal is a mobile terminal and the communications network is a 3G network.

5. The method according to claim 1, wherein the step of establishing an authentication connection between the client terminal and the communications network is performed by way of a path including a wireless network which complies with IEEE 802.11 standards.

6. The method according to claim 1, wherein the step of establishing an authentication connection between the client terminal and the communications network includes the steps of establishing extended authentication protocol over local area network and DIAMETER connections.

7. The method according to claim 1 wherein the control data signal connection tunnel is a general packet radio services (GPRS) tunneling protocol (GTP) tunnel, and the step of transmitting set-up parameters includes the step of transmitting at least one of an internet protocol address and a tunnel identification.

8. The method according to claim 7 wherein the step of transmitting set-up parameters includes the step of transmitting quality of service parameters.

9. The method according to claim 1 wherein the control data signaling connection tunnel is a dedicated general packet radio services tunneling protocol tunnel, and the step of transmitting set-up parameters includes the step of transmitting both an internet protocol address and a tunnel identification.

10-17. (withdrawn)

18. A method for operating a client terminal to establish a control connection to a communications network, said method comprising the steps of:

from said client terminal, establishing an authentication connection between said client terminal and said communications network, and requesting authentication;

at said client terminal, receiving an authentication message from said communication network, said authentication message including set-up parameters defining a control data signaling connection tunnel between said client terminal and said communications network;

from said client terminal, setting up said control data signaling connection tunnel by use of said set-up parameters;

transmitting control information between said client terminal and said communications network via said control data signaling connection tunnel; and

closing said authentication connection.

19. The method according to claim 18, wherein said step of closing said authentication connection is performed after said step of transmitting control information between said client terminal and said communications network via said control data signaling connection tunnel.

20. The method according to claim 18, wherein said steps of (a) establishing an authentication connection and (b) transmitting control information are performed by way of a wireless access point.

21. A method for communicating signaling and control information between a mobile device and a communications network, said method comprising:

establishing a radio connection between said mobile device and said communications network;

receiving by said mobile device authentication from said communications network;

receiving by said mobile device a signaling request including parameters from said communications network;

establishing by said mobile device a tunnel with said communications network;

forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established;

receiving by said mobile device an indication from said communications network of completion of authorization to communicate with said communications network through an access point;

terminating receipt of said authentication by said mobile device;
and

opening a connection through said established tunnel.

22. The method according to claim 21, wherein said communications network is a 3G network.

23. The method according to claim 21, wherein said authentication is received from a serving general packet radio service support node of said communications network.

24. The method according to claim 21, wherein said radio connection uses an extend authentication protocol or extended authentication protocol over local area network.

25. The method according to claim 21, wherein said tunnel is a general packet radio service tunnel.

26. The method according to claim 25, wherein communications through said tunnel is accomplished using a general packet radio service tunnel protocol.

27. A mobile device for exchanging information with a communications network, comprising:

means for establishing a radio connection between said mobile device and said communications network;

means for receiving by said mobile device authentication from said communications network;

means for receiving by said mobile device a signaling request including parameters from said communications network for establishing a signaling connection tunnel;

means for forwarding by said mobile device to said communications network acknowledgment of receipt of said parameters and an indication to said communications network that said tunnel has been established;

means for receiving by said mobile device an indication from said communications network of completion of authorization to communicate with said communications network through an access point;

means for closing said radio connection by said mobile device; and means for opening a connection through said established tunnel.

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Evidence Appendix

None

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Related Proceedings Appendix

None